

Notice of Allowability

Application No.

09/583,966

Examiner

Wen-Tai Lin

Applicant(s)

HALL ET AL.

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 3/11/2005 and telephone interview held on 6/2/2005.
2. ☒ The allowed claim(s) is/are 1-58.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☒ to Paper No./Mail Date 8/20/03.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable, an amendment may be filed as provided by 37 C.F.R. 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the Issue Fee.

2. Authorization for the examiner's amendment was given in a telephone interview with Mr. Jonathan Geld, reg. no. 44702, on June 2, 2005.

3. In the claims please amend claims 1-58 to the following:

1. (Currently Amended) A method for determining a status of a buffer status for use in converting between a standard SONET and a non-standard SONET frame, said method comprising:

determining keying a the buffer's almost empty or almost full status based on a length of
to a transport gap other than a of the non-standard SONET frame transport gap,
wherein
the standard SONET frame is formatted as a STS-N, and
the transport gap of the non-standard SONET frame has been rearranged to
provide a longer non-data region at the beginning of the non-standard
SONET frame; and
performing positive or negative stuffing using the buffer's almost empty or almost full status.

2. (Currently Amended) The method of Claim 1, wherein said determining the buffer's almost empty or almost full status based on the ~~keying a buffer status to a~~ transport gap of the ~~other than a non-standard SONET frame transport gap~~ further comprises:
determining keying a transmit buffer's almost empty or almost full status based on of a
transmit buffer to a the transport gap of other than the non-standard SONET
frame transport gap.
3. (Currently Amended) The method of Claim 2, wherein said determining the
keying a transmit buffer's almost empty or almost full status based on of a transmit buffer to a
the transport gap of other than the non-standard SONET frame transport gap further comprises:
the transmit buffer interposed between a pointer interpreter which receives data from a
switching matrix and a pointer generator which prepares the a standard SONET
STS-N frame.
4. (Currently Amended) The method of Claim 2, wherein said determining the
keying a transmit buffer's almost empty or almost full status based on of a transmit buffer to a
the transport gap of other than the non-standard SONET frame transport gap further comprises:
determining keying the transmit buffer's almost empty or almost full status based on to at
least a column length of the transport gap of the a non-standard SONET frame
transport gap.
5. (Currently Amended) The method of Claim 4, wherein each column of the
transport gap of the non-standard SONET frame transport gap contains 1 byte per each STS
channel in use.
6. (Currently Amended) The method of Claim 4, wherein said determining keying
the transmit buffer's almost empty or almost full status based on to at least a column length of
the transport gap of the a non-standard SONET frame transport gap further comprises:

configuring keying a pointer generator constructed to read data from the transmit buffer to at least a column length of the transport gap of the a non-standard SONET frame transport gap.

7. (Currently Amended) The method of Claim 6, wherein said configuring the keying a pointer generator constructed to read data from the transmit buffer to at least a column length of the transport gap of the a non-standard SONET frame transport gap further comprises: accepting input specifying a substantially 28-column almost-empty range for the pointer generator ~~reading data~~ constructed to read data from the transmit buffer.

8. (Currently Amended) The method of Claim 4, wherein said determining keying the transmit buffer's almost empty or almost full status based on ~~to~~ at least a column length of the transport gap of the a non-standard SONET frame transport gap further comprises: configuring keying a pointer interpreter constructed to write data to the transmit buffer to at least a column length of the transport gap of the a non-standard SONET frame transport gap.

9. (Currently Amended) The method of Claim 8, wherein said configuring the keying a pointer interpreter constructed to write data to the transmit buffer to at least a column length of the transport gap of the a non-standard SONET frame transport gap further comprises: accepting input specifying a substantially 5-column almost-full range for the pointer interpreter constructed to write data to the transmit buffer.

10. (Currently Amended) The method of Claim 1, wherein said determining the buffer's almost empty or almost full status based on the ~~keying a buffer status to a transport gap of the other than a non-standard SONET frame transport gap~~ further comprises:

determining keying a receive buffer's almost empty or almost full status based on the ~~to a transport gap of other than the non-standard SONET frame transport gap~~.

11. (Currently Amended) The method of Claim 10, wherein said determining the keying a receive buffer's almost empty or almost full status based on the ~~to~~ a transport gap of other than the non-standard SONET frame transport gap further comprises:

the receive buffer interposed between a pointer generator which feeds data to a switching matrix and a pointer interpreter which receives data.

12. (Currently Amended) The method of Claim 10, wherein said determining the keying a receive buffer's almost empty or almost full status based on the ~~to~~ a transport gap of other than the non-standard SONET frame transport gap further comprises:

determining keying the receive buffer's almost empty or almost full status based on ~~to~~ at least a column length of the transport gap of the a non-standard SONET frame transport gap.

13. (Currently Amended) The method of Claim 12, wherein each column of the transport gap of the non-standard SONET frame transport gap contains 1 byte per each STS channel in use.

14. (Currently Amended) The method of Claim 12, wherein said determining keying the receive buffer's almost empty or almost full status based on ~~to~~ at least the a column length of the transport gap of the a non-standard SONET frame transport gap further comprises:

configuring keying a pointer generator constructed to read data from the receive buffer to at least the a column length of the transport gap of the a non-standard SONET frame transport gap.

15. (Currently Amended) The method of Claim 14, wherein said configuring keying a pointer generator constructed to read data from the receive buffer to at least the a column length of the transport gap of the a non-standard SONET frame transport gap further comprises:

accepting input specifying a substantially 5-column almost-empty range for the pointer generator constructed to read data from the receive buffer.

16. (Currently Amended) The method of Claim 12, wherein said determining keying the receive buffer's almost empty or almost full status based on ~~to~~ at least the a column length of the transport gap of the a non-standard SONET frame transport-gap further comprises:

configuring keying a pointer interpreter constructed to write data to the receive buffer to at least a column length of the transport gap of the a non-standard SONET frame transport-gap.

17. (Currently Amended) The method of Claim 16, wherein said configuring keying a pointer interpreter constructed to write data to the receive buffer to at least the a column length of the transport gap of the a non-standard SONET frame transport-gap further comprises:

accepting input specifying a substantially 28-column almost-full range for the pointer interpreter constructed to write data to the receive buffer.

18. (Currently Amended) A system for determining a status of a buffer status for use in converting between a standard SONET and a non-standard SONET frame, said system comprising:

means for determining keying-a the buffer's almost empty or almost full status based on a length of ~~to~~ a transport gap ~~other than a~~ of the non-standard SONET frame transport-gap, wherein the standard SONET frame is formatted as a STS-N, and the transport gap of the non-standard SONET frame has been rearranged to provide a longer non-data region at the beginning of the non-standard SONET frame; and

means for performing positive or negative stuffing using the buffer's almost empty or almost full status.

19. (Currently Amended) The system of Claim 18, wherein said means for determining keying a the buffer's almost empty or almost full status based on the length of to a transport gap other than a of the non-standard SONET frame transport gap further comprises:

means for determining keying a transmit buffer's almost empty or almost full status based on the to-a transport gap of other than the non-standard SONET frame transport gap.

20. (Currently Amended) The system of Claim 19, wherein said means for determining keying a transmit buffer's almost empty or almost full status based on the to-a transport gap of other than the non-standard SONET frame transport gap further comprises:

the transmit buffer interposed between a pointer interpreter which receives data from a switching matrix and a pointer generator which prepares the a standard SONET STS-N frame.

21. (Currently Amended) The system of Claim 19, wherein said means for determining keying a transmit buffer's almost empty or almost full status based on the to-a transport gap of other than the non-standard SONET frame transport gap further comprises:

means for determining keying the transmit buffer's almost empty or almost full status based on to-at least a column length of the transport gap of the-a non-standard SONET frame transport gap.

22. (Currently Amended) The system of Claim 21, wherein each column of the transport gap of the non-standard SONET frame transport gap contains 1 byte per each STS channel in use.

23. (Currently Amended) The system of Claim 21, wherein said means for determining keying the transmit buffer's almost empty or almost full status based on to-at least

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~~the a column length of the transport gap of the a non-standard SONET frame transport gap~~
further comprises:

means for configuring keying a pointer generator constructed to read data from the
transmit buffer to at least ~~the a column length of the transport gap of the a non-~~
standard SONET frame transport gap.

24. (Currently Amended) The system of Claim 21, wherein said means for
determining keying the transmit buffer's almost empty or almost full status based on ~~to at least~~
~~the a column length of the transport gap of the a non-standard SONET frame transport gap~~
further comprises:

means for configuring keying a pointer interpreter constructed to write data to the
transmit buffer to at least ~~the a column length of the transport gap of the a non-~~
standard SONET frame transport gap.

25. (Currently Amended) The system of Claim 18, wherein said means for
determining keying a the buffer's almost empty or almost full status based on the length of ~~to a~~
transport gap ~~other than a of the non-standard SONET frame transport gap~~ further comprises:

means for determining keying a receive buffer's almost empty or almost full status based
on ~~to a transport gap of other than the non-standard SONET frame transport gap~~.

26. (Currently Amended) The system of Claim 25, wherein said means for
determining keying a receive buffer's almost empty or almost full status based on the ~~to a~~
transport gap ~~of other than the non-standard SONET frame transport gap~~ further comprises:

the receive buffer interposed between a pointer generator which feeds data to a switching
matrix and a pointer interpreter which receives data.

27. (Currently Amended) The system of Claim 25, wherein said means for
determining keying a receive buffer's almost empty or almost full status based on the ~~to a~~
transport gap ~~of other than the non-standard SONET frame transport gap~~ further comprises:

means for determining keying the receive buffer's almost empty or almost full status based on ~~to~~ at least the a column length of the transport gap of the a non-standard SONET frame transport-gap.

28. (Currently Amended) The system of Claim 27, wherein each column of the transport gap of the non-standard SONET frame transport-gap contains 1 byte per each STS channel in use.

29. (Currently Amended) The system of Claim 27, wherein said means for determining keying the receive buffer's almost empty or almost full status based on ~~to~~ at least the a column length of the transport gap of the a non-standard SONET frame transport-gap further comprises:

means for configuring keying a pointer generator constructed to read data from the receive buffer to at least the a column length of the transport gap of the a non-standard SONET frame transport-gap.

30. (Currently Amended) The system of Claim 27, wherein said means for determining keying the receive buffer's almost empty or almost full status based on ~~to~~ at least the a column length of the transport gap of the a non-standard SONET frame transport-gap further comprises:

means for configuring keying a pointer interpreter constructed to write data to the receive buffer to at least the a column length of the transport gap of the a non-standard SONET frame transport-gap.

31. (Currently Amended) A SONET node comprising:
at least one pointer interpreter having an almost full buffer detector set substantially equal to a number of columns present in a transport gap of a non-standard SONET frame transport-gap, wherein
a standard SONET frame is formatted as an STS-N, and

the transport gap of the non-standard SONET frame has been rearranged to provide a longer non-data region at the beginning of the non-standard SONET frame.

32. (Currently Amended) The SONET node of Claim 31, wherein the number of columns present in the transport gap of the a non-standard SONET frame ~~transport gap~~ comprises 27 columns of data.

33. (Currently Amended) The SONET node of Claim 32, wherein each of the columns comprises at least one byte of data for each STS channel in use.

34. (Currently Amended) The SONET node of Claim 31, wherein the SONET node further comprises one or more components selected from the group comprising a processor, a memory device, a bus, and a communications device.

35. (Currently Amended) A SONET node comprising:
at least one pointer generator having an almost empty buffer detector set substantially equal to a number of columns present in a transport gap of a non-standard SONET frame ~~transport gap~~, wherein
a standard SONET frame is formatted as an STS-N, and
the transport gap of the non-standard SONET frame has been rearranged to provide a longer non-data region at the beginning of the non-standard SONET frame.

36. (Currently Amended) The SONET node of Claim 35, wherein the number of columns present in the transport gap of the a non-standard SONET frame ~~transport gap~~ comprises 27 columns of data.

37. (Currently Amended) The SONET node of Claim 36, wherein each of the columns comprises at least one byte of data for each STS channel in use.

38. (Currently Amended) The SONET node of Claim 35, wherein the SONET node further comprises one or more components selected from the group comprising a processor, a memory device, a bus, and a communications device.

39. (Currently Amended) A method for maintaining communications comprising:
detecting a transition involving at least one non-standard SONET frame, wherein
a standard SONET frame is formatted as a STS-N, and
the transport gap of the non-standard SONET frame has been rearranged to
provide a longer non-data region at the beginning of the non-standard
SONET frame;

in response to said detecting yielding a determination that a receive FIFO buffer is almost full during the transition involving at least one non-standard SONET frame,
engaging in negative stuffing; and

in response to said detecting yielding a determination that a receive FIFO buffer is almost empty during the transition involving at least one non-standard SONET frame,
engaging in positive stuffing.

40. (Currently Amended) The method of Claim 39, wherein the determination that a receive buffer is almost full comprises:

detecting that the receive FIFO buffer has less empty space than that required to buffer data during construction of a ~~non-standard~~ transport gap of the non-standard SONET frame.

41. (Currently Amended) The method of Claim 40, wherein said detecting that the receive FIFO buffer has less empty space than that required to buffer data during construction of a ~~non-standard~~ transport gap of the non-standard SONET frame further comprises:

detecting that the receive FIFO buffer has space less than or equal to twenty-eight columns of data when the ~~non-standard~~ transport gap of the non-standard SONET frame is twenty-seven columns of one row of the non-standard SONET frame of data in size.

42. (Currently Amended) The method of Claim 39, wherein the determination that the a receive FIFO buffer is almost empty comprises:

detecting that the receive FIFO buffer has less full space than that required to ensure a constant outflow of data from the receive FIFO buffer during interpretation of a transport gap of a standard SONET frame transport gap.

43. (Currently Amended) The method of Claim 42, wherein said detecting that the receive FIFO buffer has less full space than that required to ensure a constant outflow of data from the receive FIFO buffer during interpretation of the transport gap of a standard SONET frame transport gap further comprises:

detecting that the receive FIFO buffer has space less than or equal to five columns of data when the standard transport gap of the standard SONET frame is three columns of data in size.

44. (Currently Amended) A system for maintaining communications comprising:
means for detecting a transition involving at least one non-standard SONET frame,
wherein

a standard SONET frame is formatted as a STS-N, and
the transport gap of the non-standard SONET frame has been rearranged to
provide a longer non-data region at the beginning of the non-standard
SONET frame;

means, responsive to said means for detecting yielding a determination that a receive FIFO buffer is almost full during the transition involving at least one non-standard SONET frame, for engaging in negative stuffing; and

means, responsive to said means for detecting yielding a determination that a receive FIFO buffer is almost empty during the transition involving at least one non-standard SONET frame, for engaging in positive stuffing.

45. (Currently Amended) The system of Claim 44, wherein said means, responsive to said means for detecting yielding a determination that a receive FIFO buffer is almost full during

the transition involving at least one non-standard SONET frame, for engaging in negative stuffing further comprises:

means for detecting that the receive FIFO buffer has less empty space than that required to buffer data during construction of the a non-standard transport gap of the non-standard SONET frame.

46. (Currently Amended) The system of Claim 45, wherein said means for detecting that the receive FIFO buffer has less empty space than that required to buffer data during construction of the a non-standard transport gap of the non-standard SONET frame further comprises:

means for detecting that the receive FIFO buffer has space less than or equal to twenty-eight columns of data when the non-standard transport gap of the non-standard SONET frame is twenty-seven columns of one row of the non-standard SONET frame of data in size.

47. (Currently Amended) The system of Claim 44, wherein said means, responsive to said means for detecting yielding a determination that a receive FIFO buffer is almost empty during the transition involving at least one non-standard SONET frame, for engaging in positive stuffing further comprises:

means for detecting that the receive FIFO buffer has less full space than that required to ensure a constant outflow of data from the receive FIFO buffer during interpretation of a transport gap of a standard SONET frame ~~transport gap~~.

48. (Currently Amended) The system of Claim 47, wherein said means for detecting that the receive FIFO buffer has less full space than that required to ensure a constant outflow of data from the receive FIFO buffer during interpretation of a transport gap of a standard SONET frame ~~transport gap~~ further comprises:

means for detecting that the receive FIFO buffer has space less than or equal to five columns of data when the standard transport gap of the standard SONET frame is three columns of data in size.

49. (Currently Amended) A method for maintaining communications comprising:
detecting a transition involving at least one non-standard SONET frame, wherein
a standard SONET frame is formatted as a STS-N, and
the transport gap of the non-standard SONET frame has been rearranged to
provide a longer non-data region at the beginning of the non-standard
SONET frame;

in response to said detecting yielding a determination that a transmit FIFO buffer is
almost full during the transition involving at least one non-standard SONET
frame, engaging in negative stuffing; and

in response to said detecting yielding a determination that a transmit FIFO buffer is
almost empty during the transition involving at least one non-standard SONET
frame, engaging in positive stuffing.

50. (Currently Amended) The method of Claim 49, wherein the determination that the
transmit FIFO buffer is almost full comprises:

detecting that the transmit FIFO buffer has less empty space than that required to buffer
data during construction of the a-standard transport gap of the standard SONET
frame.

51. (Currently Amended) The method of Claim 50, wherein said detecting that the
transmit FIFO buffer has less empty space than that required to buffer data during construction
of the a-standard transport gap of the standard SONET frame further comprises:

detecting that the transmit FIFO buffer has space less than or equal to five columns of
data when the standard transport gap of the standard SONET frame is three
columns of data in size.

52. (Currently Amended) The method of Claim 49, wherein the determination that the transmit FIFO buffer is almost empty comprises:

detecting that the transmit FIFO buffer has less empty space than that required to buffer data during interpretation of ~~a non-standard~~ the transport gap of the non-standard SONET frame.

53. (Currently Amended) The method of Claim 52, wherein said detecting that the transmit FIFO buffer has less empty space than that required to buffer data during interpretation of ~~a non-standard~~ the transport gap of the non-standard SONET frame further comprises:

detecting that the transmit FIFO buffer has space less than or equal to twenty-eight columns of data when the ~~non-standard~~ transport gap of the non-standard SONET frame is twenty-seven columns of one row of the non-standard SONET frame of data in size.

54. (Currently Amended) A system for maintaining communications comprising:
means for detecting a transition involving at least one non-standard SONET frame,

wherein

a standard SONET frame is formatted as a STS-N, and

the transport gap of the non-standard SONET frame has been rearranged to
provide a longer non-data region at the beginning of the non-standard
SONET frame;

means, responsive to said means for detecting yielding a determination that a transmit FIFO buffer is almost full during the transition involving at least one non-standard SONET frame, for engaging in negative stuffing; and

means, responsive to said means for detecting yielding a determination that a transmit FIFO buffer is almost empty during the transition involving at least one non-standard SONET frame, for engaging in positive stuffing.

55. (Currently Amended) The system of Claim 54, wherein said means, responsive to said means for detecting yielding a determination that a transmit FIFO buffer is almost full during the transition involving at least one non-standard SONET frame, for engaging in negative stuffing further comprises:

means for detecting that the transmit FIFO buffer has less empty space than that required to buffer data during construction of ~~the a-standard~~ transport gap of the standard SONET frame.

56. (Currently Amended) The system of Claim 55, wherein said means for detecting that the transmit FIFO buffer has less empty space than that required to buffer data during construction of ~~the a-standard~~ transport gap of the standard SONET frame further comprises:

means for detecting that the transmit FIFO buffer has space less than or equal to five columns of data when the ~~standard~~ transport gap of the standard SONET frame is three columns of data in size.

57. (Currently Amended) The system of Claim 54, wherein said means, responsive to said means for detecting yielding a determination that a transmit FIFO buffer is almost empty during the transition involving at least one non-standard SONET frame, for engaging in positive stuffing further comprises:

means for detecting that the transmit FIFO buffer has less empty space than that required to buffer data during interpretation of ~~a non-standard~~ the transport gap of the non-standard SONET frame.

58. (Currently Amended) The system of Claim 57, wherein said means for detecting that the transmit FIFO buffer has less empty space than that required to buffer data during interpretation of ~~a non-standard~~ the transport gap of the non-standard SONET frame further comprises:

means for detecting that the transmit FIFO buffer has space less than or equal to twenty-eight columns of data when the ~~non-standard~~ transport gap of the non-standard

SONET frame is twenty-seven columns of one row of the non-standard SONET frame of data in size.

4. The Abstract has been amended to within 150 words (see the attached page).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)872-9306 for official communications; and

(571)273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen Tai Lin
6/3/05

ABSTRACT OF THE DISCLOSURE

A method for determining a status of a buffer for use in converting between a standard SONET and a non-standard SONET frame is presented. The method determines the buffer's almost empty or almost full status based on a length of a transport gap of the non-standard SONET frame, wherein the standard SONET frame is formatted as a STS-N, and the transport gap of the non-standard SONET frame has been rearranged to provide a longer non-data region at the beginning of the non-standard SONET frame. The method then uses the buffer's almost empty or almost full status to trigger positive or negative stuffing. The method is used for maintaining communications when using asymmetrical gapping structures.